

Remarks

The Applicants note with appreciation the Examiner's helpful comment concerning the typographical error in Claim 1. Claim 1 has accordingly been amended to correct that typographical error.

The Applicants acknowledge the rejection of Claims 1 – 3 and 5 – 12 under 35 U.S.C. §103 over the hypothetical combination of Ishii with Miyakawa. The Applicants respectfully submit that one of ordinary skill in the art would not make the hypothetical combination for the reasons set forth below.

Miyakawa produces a polyester film reflector for a surface light source. The polyester film is comprised of a polyester white film which contains fine voids in the interior thereof and also contains 2 to 25 weight percent of a filler that is an incompatible polymer with the polyester white film. The white polyester film is laminated with a material that contains 5 – 25 weight percent of inorganic particles. The laminating may be made from PET, for example.

Ishii discloses a light reflective sheet that is supposedly useful for a number of purposes, including backlight units of liquid crystal displays, among other things. The light reflective sheet of Ishii is formed from a porous resin sheet which is made from polyolefins such as high density polyethylene, low density polyethylene, polypropylene, ethylene propylene and methylpentene. Such polyolefin resins are selected in Ishii because of their ability to successfully disperse large quantities of inorganic filler within the resin. The quantities of inorganic filler that are dispersible within the polyolefin resins of Ishii are quite large. Specifically, the amount of filler that can be added to such polyolefin resins is in the range of from 180 to 300 parts by weight with respect to 100 parts by weight of the polyolefin resin. In other words, two to three times as much filler, on a weight basis, can be added to a composition including the filler and the resin. The porous resin sheet of Ishii can

also include certain additives such as additives having an ultraviolet absorbing ability, including benzophenone compounds, as helpfully pointed out in the Official Action. Ishii also discloses that the porous resin sheet can be coated with a protective layer such as a layer of polyester resin. Ishii further mentions that additives such as an ultraviolet absorber and a stabilizer may be added to the protective layer.

With that basic summary of each of the primary and secondary references, the Applicants respectfully submit that one of ordinary skill in the art would not make the hypothetical combination when attempting to solve the problems that the Applicants were attempting to solve. This is fundamentally because of serious differences between the invention as set forth in the recited claims and each of the cited references. Specifically, this invention and each of Miyakawa and Ishii sharply differ from each other with respect to purpose, technical idea and effect as set forth in detail below:

In the protective layer of Ishii and the coated surface layer containing the optical stabilizer of this invention, the purpose and effect sharply differ.

Ishii provides a protective layer on the porous resin sheet which consists of polyolefin for the following reasons:

- a. Stiffness of the film
- b. To prevent deterioration of electric insulation due to damage
- c. To prevent a decline in reflectance and leakage of light after UV irradiation

Ishii uses the following materials as a protective layer as a means to obtain these properties:

- a. A PET film, polyester coat (Examples 1, 4, 6, etc.)
- b. Silicone, an acrylic coat, a PMMA film (Examples 2, 3, 5)

In Ishii, a polyester coating is used as a protective layer to improve rigidity of the film, or prevent deterioration of electric insulation due to damage. However, the coating layer containing

optical stabilizer prevents the polyester film from degrading due to UV. In other words, the purposes differ from each other.

Further, the items that control the decline in reflectance after irradiating with UV also differ from each other. Ishii discloses that if degradation by a UV irradiation can be controlled and the light transmissivity in the range of 450 – 550 nm after irradiation of a UV is less than 10%, it is indicated that the protection layer itself deteriorates. That is, Ishii differs from this invention greatly at the point that other properties, such as color tone (degree of yellow) and luminosity may change.

The film of this invention has a layer which contains an optical stabilizer on the white film.

The objectives are as follows:

- a. To prevent a generation of yellowing and a decline in reflectance; and
- b. Suppress decreases in luminous intensity

In order for the coating layer of this invention to prevent UV degradation of the white film, it is necessary to absorb UV. It is also necessary that the coating layer itself is not deteriorated and turned yellow by UV since polyester tends to turn yellow. However, the olefin sheet of Ishii does not change. This invention resolves the above-mentioned problems by containing an optical stabilizer in the coating layer. For this reason, it is very important to contain an optical stabilizer.

Thus, it is clear that the Applicants' utilization of the light stabilizer is in large part because of the need to avoid the polyester from turning yellow. This is an important aspect of the invention. However, if one of ordinary skill in the art were to look to Ishii, there is nothing in Ishii that suggests to one of ordinary skill in the art that the light stabilizer be supplied for the purpose of solving the serious problem of having the polyester turn yellow. It should be remembered in that regard that Ishii does not employ a polyester, but employs a polyolefin which, as set forth above, has been shown to be quite different and not subject to the yellowing that the polyester is subject to.

Careful scrutiny of the entire Ishii disclosure reveals that there are no teachings or suggestions to those of ordinary skill in the art that would lead them to believe that providing the light stabilizer would cure this problem as encountered by Applicants. As a consequence, the Applicants respectfully submit that one of ordinary skill in the art would not make the hypothetical combination as suggested in the Official Action.

It must be remembered that the prior art must provide teachings or suggestions to make the modification which does not exist in this case and the prior art must also provide one of ordinary skill in the art a reasonable expectation of success. In this case, there is utterly no reasonable expectation of success since Ishii does not have any description concerning the possible benefit of employing a light stabilizer to solve the Applicants' problem of the polyester turning yellow as a consequence of exposure to UV. The reason for this is simple---Ishii does not disclose a polyester sheet, but instead uses a polyolefin sheet that is not subject to yellowing. The Applicants therefore respectfully submit that one of ordinary skill in the art would not make the hypothetical combination and that the solicited claims are fully patentable over both of Miyakawa and Ishii, whether taken individually or collectively. Withdrawal of the rejection is respectfully requested.

With respect to the double-patenting rejection, Miyakawa discloses the example with respect to a layer after a corona processing on a white film, which corresponds to Examples 5 and 7. However, this coating layer has contained in it a fluorescent whitening agent for the purpose of acquiring improving reflectance and a white color tone, which keeps the degree of gloss.

On the other hand, in this invention, the layer containing an optical stabilizer is prepared for the purpose that the coating layer itself is not deteriorated by UV irradiation and yellowing. At the same time, it absorbs UV and, in order to prevent degradation by UV irradiation for the white film, the film has the layer containing an optical stabilizer as the main composition ingredient. That is,

the purpose of a coating layer completely differs from its function. Therefore, Applicants respectfully request withdrawal of the double-patenting rejection.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,


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